

Attorney Docket # 4925-137PUS

Serial No. 09/914,307  
 Amdt. dated April 15, 2004  
 Reply to Office Action dated January 15, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

A4  
 1. (Currently Amended) A method for use in a cellular telecommunications network for selection of a cell for use by a mobile station in a cell-connected state, said cellular telecommunications network comprising a plurality of radio access networks having cells, said cells being grouped into registrations areas, and said mobile station having a plurality of states, said states comprising an idle-mode state; a registration-area-connected state, in which state the location of a mobile station [~~in which state~~] is known to the cellular telecommunications network on a registration area level; and a cell-connected state, in which state the location of a mobile station [~~in which state~~] is known to the cellular telecommunications network on a cell level, [~~characterized in that cell identification information is attached as a parameter to a message initiating the change of the mobile station to the cell-connected state, and in that~~] the method compris[es] the steps [~~in which~~] of:

- [-] selecting, by the network, [~~selects (104, 105)~~] a cell to be suggested as the cell for use by the mobile station in the cell-connected state, and
- [-] indicating, by the network, [~~indicates (110)~~] said selected cell to be suggested by attaching cell identification information as a parameter to a [~~said~~] message initiating a change of the mobile station to the cell-connected state.

2. (Currently Amended) The [A] method [~~according to~~] of claim 1, wherein [~~characterized in that~~] said message is [~~as~~] a Radio Resource Control (RRC) message.

3. (Currently Amended) The [A] method [~~according to~~] of claim 1, [~~characterized in that the method comprises~~] further comprising the steps [~~in which~~] of:

- [-] selecting, by the mobile station, [~~selects (140)~~] a cell for use in the cell-connected state, and

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[~~-~~] indicating, by the mobile station, [~~indicates (150)~~] the selected cell by attaching cell identification information as a parameter to a second message.

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4. (Currently Amended) The [A] method [according to] of claim 3, wherein [characterised in that in] the step[s] in which the mobile station selects a cell[~~, the selection is made~~] comprises the step of:

selecting from a set of cells comprising cells known by the mobile station and said cell suggested [indicated] by the network.

5. (Currently Amended) The [A] method [according to] of claim 1, [characterised in that the method comprises a] further comprising the step[~~, in which~~] of:

selecting, by the network, [~~selects~~] a cell of the active set of the mobile station to be a default cell to be suggested to the mobile station.

6. (New) A method for reducing the signaling between a radio access network and a mobile station when the mobile station transitions from a dedicated channel state, in which the mobile station has one dedicated radio link for each cell in the set of cells used by the mobile station, to a common channel state, in which the mobile station shares a common channel with other users, comprising the step of:

suggesting, by the radio access network, a cell to be used by the mobile station in the common channel state, said suggesting step comprising the sub-steps of:

selecting the cell to suggest,

attaching information identifying the selected cell to suggest as a parameter to a control message from the radio access network to the mobile station, wherein said control message initiates a procedure in the mobile station, and said procedure may result in a transition from the dedicated channel state to the common channel state, and

transmitting said control message with the attached information identifying the suggested cell to the mobile station.

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7. (New) The method of claim 6, further comprising the steps of:

receiving, by the mobile station, the control message with the attached information identifying the suggested cell; and  
performing, by the mobile station, the procedure initiated by the received control message.

A4 8. (New) The method of claim 7, wherein the control message transmitted from the radio access network to the mobile station comprises a command to initiate the procedure (a procedure-command message).

9. (New) The method of claim 7, further comprising the step of:

transmitting, by the mobile station, a control message to the radio access network indicating that the procedure has been completed, wherein said procedure-complete control message comprises information identifying the cell to be used by the mobile station in the common channel state.

10. (New) The method of claim 9, wherein the cell to be used by the mobile station in the common channel state is the cell suggested by the radio access network.

11. (New) The method of claim 9, further comprising the step of:

selecting, by the mobile station, the cell to be used by the mobile station in the common channel state, wherein it is the selected cell which is identified in the information transmitted in the procedure-complete control message.

12. (New) The method of claim 7, further comprising the step of:

checking whether there are only common channel connections left between the mobile station and the radio access network after the procedure has been performed by the mobile station.

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13. (New) The method of claim 12, wherein, if only common channel connections are left after the procedure has been performed, the method further comprises the step of:

selecting, by the mobile station, the cell to be used by the mobile station in the common channel state, which the mobile station will enter because there will only be common channel connections left after the procedure is performed.

A4 14. (New) The method of claim 13, wherein the step of selecting the cell to be used by the mobile station in the common channel state comprises the step of:

selecting from a set of cells comprising at least the cell suggested by the radio access network.

15. (New) The method of claim 14, wherein the set of cells further comprises any cells known to the mobile station.

16. (New) The method of claim 14, wherein, if only common channel connections are left after the procedure has been performed, the method further comprises the step of:

transmitting, by the mobile station, a control message to the radio access network indicating that the procedure has been completed, wherein said procedure-complete control message comprises information identifying the cell, selected by the mobile station, to be used in the common channel state.

17. (New) The method of claim 12, wherein, if only common channel connections are left after the procedure has been performed, the method further comprises the step of:

transmitting, by the mobile station, a control message to the radio access network indicating that the procedure has been completed, wherein said procedure-complete control message comprises information identifying the cell to be used by the mobile station in the common channel state.

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18. (New) The method of claim 12, wherein the radio access network performs the checking step.

19. (New) The method of claim 18, wherein, if the radio access network determines that not only common channel connections are left after the procedure has been performed, the radio access network does not perform the suggesting step.

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20. (New) A method for reducing the signaling between a radio access network and a mobile station when the mobile station transitions from a dedicated channel state, in which the mobile station has one dedicated radio link for each cell in the set of cells used by the mobile station, to a common channel state, in which the mobile station shares a common channel with other users, comprising the steps of:

when a control message commanding a mobile station to perform a control procedure is to be sent to the mobile station from a radio access network, performing the step of:

checking, by the radio access network, whether there will be only common channel connections left between the mobile station and the radio access network after the procedure commanded by the control message has been completed;

if the radio access network determines that there will be only common channel connections left between the mobile station and the radio access network after the procedure commanded by the control message has been completed, performing the steps of:

selecting, by the radio access network, a cell to be used by the mobile station in the common channel state, into which state the mobile station will transition after the procedure is performed because there will only be common channel connections left,

attaching information identifying the selected cell as a parameter to the control message commanding the mobile station to perform a control procedure, and transmitting said control message with the attached information identifying the selected cell to the mobile station; and

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if the radio access network determines that there will be at least one dedicated channel connection left between the mobile station and the radio access network after the procedure commanded by the control message has been completed, performing the step of:

transmitting said control message.